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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,080	04/02/2001	Johannes-Jorg Rueger	10744/1400	8506

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EXAMINER

NGHIEM, MICHAEL P

ART UNIT PAPER NUMBER

2863

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Supplemental
Notice of Allowability**

Application No.

09/824,080

Examiner

Michael P Nghiem

Applicant(s)

RUEGER ET AL.

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.
2. ☒ The allowed claim(s) is/are 2-9.
3. ☒ The drawings filed on 07 September 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given by Mr. Clifford Ulrich during a telephone interview on October 20, 2004.

2. The application has been amended as follows:

In the specification:

Page 1, line 4, replace the present paragraph with the following:

-- The present invention concerns a method [[as defined in the preamble of claim 1]] and an apparatus [[as defined in the preamble of claim 10, i.e. a method and an apparatus]] for controlling system parameters, in particular for controlling the voltage applied to piezoelectric elements within a circuit for charging and discharging piezoelectric elements. --

Page 5, line 20, replace the present paragraph with the following:

-- This object of the present invention is achieved [[by an object of method claim 1, i.e.,]] by a method for controlling system parameters, in particular for controlling the voltage applied to piezoelectric elements within a circuit for charging and discharging

Art Unit: 2863

piezoelectric elements. At least one control parameter for the control of a system parameter, in particular a target voltage for the voltage applied to a piezoelectric element is modified in view of at least one systematic error occurring during a first control procedure of the system parameter to obtain a corrected control parameter for a second and/or a further control of the system parameter.

Page 5, line 32, replace the present paragraph with the following:

-- An object of the present invention is further achieved by [[the object of apparatus claim 10, i.e., by]] an apparatus, in particular eligible for usage with the inventive method, in which are implemented: modification means for the modification of system parameters according to at least one control parameter; measuring means for the measurement of the value of the resulting system parameter; comparison means for the comparison of the measured value to a predefined target value; and calculation means for the calculation of at least one control parameter for a further modification of the system parameter in accordance with differences occurring between the measured value and the target values. --

Page 6, line 10, replace the present paragraph with the following:

-- As stated [[in claims 1 and 10]], the general approach of the invention is to improve the performance of the controlled system during future control procedures rather than during a first present control procedure (hence, as an example, within a first charging

Art Unit: 2863

procedure a target voltage of 100 V is used in order to bring a piezoelectric element to a voltage of 100 V; however, after termination of the procedure, it turns out that in fact just a voltage of 90 V was achieved; hence, the next time when an element should be brought up to 100 V, a corrected target voltage of 110 V is used, since the foregoing experience teaches that there is a minus of 10 V while doing so; similarly, in case one element should be brought to a target of 150 V a corrected target of 160 V may be used and so on). Hence, an existing control system, in particular a system for controlling the voltage applied to piezoelectric elements within a circuit for charging and discharging piezoelectric elements, can be used without any (or without any significant) technical modifications of the system, and the performance is nevertheless improved for the major part of the control procedures. This in particular holds in case of a large number of control procedures during a typical application of the control system. Hence, the invention provides an inexpensive and elegant improvement of the performance of a control system. --

Page 6, line 33, replace the present paragraph with the following:

-- Advantageous implementations of the invention are addressed [[in the dependent claims 2 through 8]]. Corresponding implementations provide the advantage of modifying the desired voltage in order to substantially eliminate the systematic errors that occur within the control system and result in inaccurate control of the piezoelectric actuators. --

Contact Information

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (571) 272-2277. The examiner can normally be reached on M-H from 6:30AM – 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached at (571) 272-2269. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



MICHAEL NGHIEM
PRIMARY EXAMINER
Michael Nghiem

October 20, 2004